

Section 4152 - Economic Sensitivity Factors

The purpose of this section is to discuss the economic sensitivity of the Honolulu area. Each of the topics will be briefly described including their characteristics and locations.

Commercial Fisheries

Commercial fisheries in Hawaii are mainly based on offshore resources. Included in these resources are bottomfish (opakapaka, onaga, etc.), crustaceans (lobsters, shrimp and crab) and pelagics (several species of tuna, mahimahi, etc.). The annual yield of fish in Hawaii's waters have not been precisely determined but could be as high as 43 million pounds (PBDC 1983). National Marine Fisheries Service estimates that 28 million pounds of locally caught fish were marketed in Hawaii at an estimated value of \$62 Million in 1991. The commercial fishing fleet is composed of 525 full-time commercial vessels and employed approximately 2,627 people in 1990. In addition, seafood marketing firms employ about 2,700 people and were expected to reach \$176 million in annual seafood sales by 1990. An oil spill would not significantly affect these fisheries because of their location offshore

Inshore and Nearshore Resources

Hawaii's inshore and nearshore fisheries resources are limited. Inshore resources are harvested using nets, spears and pole-and-line. Nearshore fisheries include bottom fishing and trolling by small recreational vessels usually within 10 miles of shore. Although accurate figures on the number of the individuals and the amount of effort they expend are not available, it is recognized that the number of people participating in these fisheries is very large compared to the offshore fisheries. There were 2,770 registered fisherman who fished on a part-time basis and sold their catch in 1990. A significant number of these inshore and nearshore fisherman would be affected by an oil spill.

Baitfish Areas

There are two embayment areas on Oahu (Pearl Harbor and Kaneohe Bay) that are important breeding grounds for baitfish. These small baitfish (e.g. nehu) are caught by commercial fishing vessels using live-bait fishing techniques. An oil spill in either of these locations would potentially decimate the baitfish stocks, which in turn would eliminate those commercial boats relying on live-bait, primarily Hawaiian sampans fishing for skipjack tuna.

Berthing Facilities

The majority of the commercial fishing fleet works out of either Honolulu Harbor or Kewalo Basin. Although the fleet is not all in at any one time, except in inclement weather, all available berths are usually filled with boats. An oil spill that occurs within the harbors, would affect the majority of the commercial fleet as most support services for the industry are located close to these harbors. Impacts on the fishery itself would be minimal but the inability to offload catch, refuel, and purchase supplies could provide an economic hardship.

Commercial Ocean Recreation

In 1990, the State's ocean recreation industry was conservatively estimated to be valued at \$509.6 million dollars in direct revenues. The industry sectors include: recreational fishing, cruise ships, tour boats, surf shops, personal boating, competitive events (yacht racing, ocean swims/triathalons, surf contests, Hawaiian canoe racing), dive shops, charter boat fishing, billfish tournaments, jet skiing, parasailing and kayaking. It is estimated that roughly 70 percent of the revenues generated by these sectors is generated by recreational activities on Oahu. All of these activities primarily occur within a mile or less from shore; most are concentrated within the nearshore reef zone.

The harbors along Oahu's south shore make up the bulk of the state's inventory of harbor facilities. A significant number of activities originate out of these harbor facilities: Keahi Lagoon (parasailing, water skiing, jet skiing, tour boats, windsurfing, sailing, etc.), Honolulu Harbor (tour boats and cruise ships), Kewalo Basin (dive boats, charter fishing, tour boats), and Ala Wai Harbor (recreational fishing and recreational sailing/boating). In addition, there are a number of concessions operating off of Waikiki Beach that provide activities such as canoe rides, catamaran rides, surfing lessons, etc.

The other major commercial ocean recreation areas include:

- ⊕ Oahu, Kaneohe Bay
for tour boat activities and recreational fishing, boating, sailing, and the like.
- ⊕ Oahu, North Shore
for surfing contests and diving.
- ⊕ Oahu, Waianae Coast
for recreational fishing and diving.

As the above descriptions indicate, any oil spill along Oahu's south shore would have a significant negative impact on the ocean recreation industry. All nearshore activities will be devastated, (e.g. surfing lessons, canoe rides, etc.). As the majority of the activities utilize harbor facilities along the south shore, any spill that keeps these vessels from the harbors would be detrimental because there are no other facilities available.

Tourism

Waikiki is the premier resort destination on Oahu, and in the State of Hawaii. Nearly 33,000 visitor units (44% of the State's visitor plant inventory) are located in Waikiki. Recent estimates indicated that the daily census of people residing, lodging, and working in Waikiki is now over 130,000 with visitors comprising over 50% of that figure.

Over the Years, the public and private sectors have invested significantly in Waikiki through the development of hotels, residences, commercial facilities, parks and recreation areas, and supporting infrastructure facilities and services. Additional funds are expected to be invested as plans to redevelop and rejuvenate the region proceed through the Waikiki master planning process.

This massive investment in Waikiki generates, directly and indirectly:

- ⊕ 45% of total visitor expenditures in the state,
- ⊕ 16% of the state's total gross excise tax collections,
- ⊕ 60% of all hotel room taxes collected,
- ⊕ 14% of Honolulu's real property tax revenues.

As such, a loss in visitor arrivals to Oahu and the state due to the publicity of an oil spill off the shores of Waikiki would have tremendous adverse impacts to the State of Hawaii's economy.

In addition to Waikiki, Oahu has several other resort areas and visitor attractions along the coastline which contribute to the state's economy. Included are the following attractions;

- ⊕ Hanauma Bay
- ⊕ Sea Life Park
- ⊕ Turtle Bay Resort
- ⊕ Ko Olina Resort
- ⊕ Arizona Memorial Complex.

While their contributions to the Honolulu and state economies are not as significant as those of Waikiki, an oil spill offshore any of these areas, nonetheless would have serious adverse impacts on Hawaii's visitor industry.

Ocean Research and Resource Facilities

There are a number of research centers around Oahu that have significant marine research activities occurring within their facilities. The centers also maintain an abundance of marine life. Many of these facilities rely on salt water intake from pipes located in the ocean directly off their facilities to keep their marine life alive. They include the following;

- ⊕ Waikiki Aquarium,
- ⊕ Sea Life Park,
- ⊕ Oceanic Institute,
- ⊕ Makai Pier (Waimanalo),
- ⊕ The Hawaii Institute of Marine Biology,
- ⊕ The Mariculture Research Training Center (Kaneohe Bay),
- ⊕ Hawaii Marine Enterprises and other commercial aquaculture facilities (Kahuku),
- ⊕ Natural Energy Lab (Island of Hawaii),
- ⊕ Ocean Thermal Energy Corporation (Island of Hawaii).

Although the economic impacts of an oil spill on these facilities is not known, both the Waikiki Aquarium and Sea Life Park are major tourist attractions. Sea Life Park had a visitor attendance of 692,607 in 1990. Waikiki Aquarium hosted 303,297 visitors that same year. An oil spill at any of these locations would decimate the marine life and cause major problems to intake pumps and other facilities. Additionally, any ongoing experiments would be negatively affected; researchers would have to start data collection all over again. Since a number of these facilities also contain rare or endangered species, the potentially negative biological impacts would be profound.

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